

SEPTEMBER

RAILWAYS

INCORPORATING

RAILWAY PICTORIAL AND LOCOMOTIVE REVIEW



IN THIS ISSUE:

- ★ COMMON USER DUTY. THE S.Y.R.
- ★ NORTH STAFFORD AND M. & G.N. LOCOMOTIVES.
- ★ SERVICES OF 1851 AND 1951 COMPARED.

1'6



Westheath Common, Rogate.
Southern Region.

Class 'D3' 32380 (ex L.B.S.C.R. Thornton Heath)
on Petersfield—Midhurst train.

Photograph by
P. M. Alexander.

BRANCH LINE CLOSURES.

IN RESPONSE TO OUR APPEAL LAST MONTH for details of Branches which it is believed may be closed to passenger traffic we have received the following:

Western Region: Little Somerford - Malmesbury (Service due to cease 16th June, 1951 but presumed reprieved; out during fuel crisis); Llantrisant - Tonteg Ht.; Colbren Jc. - Brecon; Burry Port and Cwm Mawr; Pencader - Newcastle Emlyn (Council notified Autumn, 1950); Lampeter - Aberayron (shown in time table as open but closed 3/2/51); Kidlington - Blenheim & Woodstock; Much Wenlock - Craven Arms; Kington - New Radnor (shown in time table but closed 3/2/51); Titley - Presteigne (shown in time table but closed since 3/2/51); Goods Branches: Cemmaes Rd. - Dinas Mawddly (closed 1/7/51); Welshpool - Llanfair; Abermule - Kerry. Southern Region: Weymouth - Portland; Upwey Jc. - Abbotsbury.

All these branches, unless other details are given, may be closed to passenger traffic (or freight) and they were kindly sent to us by Mr. J. F. Burrell. We also learn that the following Southern Region Branches are under consideration for closure: Robertsbridge - Headcorn; Canterbury West - Whitstable Harbour; Salisbury - West Moors; Alton - Fareham; Chichester - Midhurst; Fullerton - Longparish; Botley - Bishops Waltham; and the Kemp Town and Bulford Branches. Mr. C. A. Bartlett informs us that the Rickmansworth (Church

St.) - Watford Jc. Branch is also to be closed to passenger traffic. The N.E.R. have announced that Birstall Town station was closed to passenger traffic on 1st August and the Scot. R. announce that on 10th September Gretna and Drum stations are to be closed and on the same day the passenger service will be withdrawn from the Polton Branch and the 8 stations between Ayr and Muirkirk. Mr. A. M. Davies informs us that the Holywell Branch (entirely); Hunts Cross - Southport (Lord St.) (passengers); and Bury - Holcombe Brook lines are likely to be closed on the L.M.R. The Banbury - Blisworth Branch was closed on 2nd July, as was the Pwllrychog Incline and Scot. R. further announce that on 10th September passenger services will be withdrawn from the Wilsontown, Selkirk, Penicuik and Reston/Duns Branches and the Blairhill & Gartsherrie to Bothwell line.

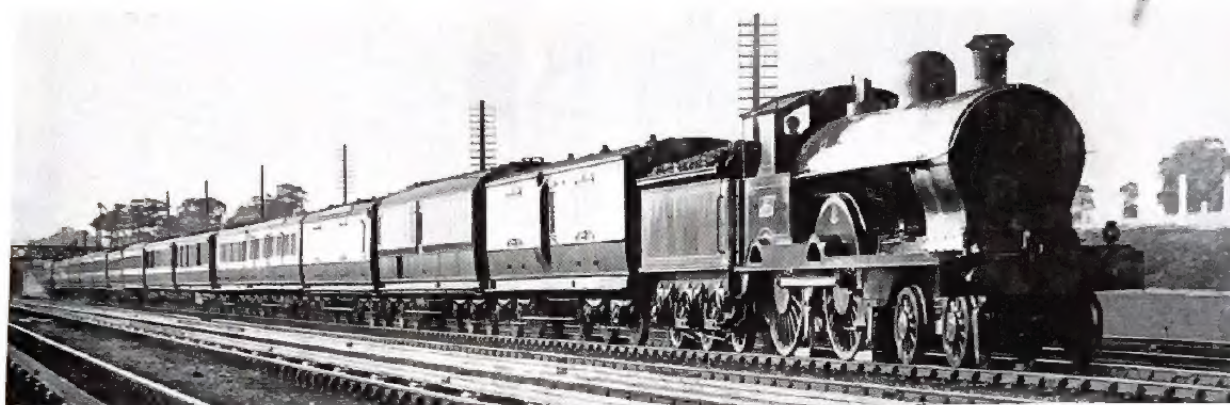
The closure of some of the branches given in this and earlier issues would come as no surprise and in certain other cases, notably those branches between two main lines, it may be that not all will be closed but only those which are least profitable, those lines from which a reasonable amount of revenue is drawn being kept open as alternative routes.

It may be that the Railway Executive feels that it must withdraw services which are not profitable in order to satisfy critics who are not so much concerned with the

railways as such, but as a subject fit for political speechmaking. For Lord Hurcombe has himself said that the amount to be saved by closing down branches and stations cannot save more than a small percentage of the losses now being incurred. Nor does it seem likely that a great many of the men who work the branch line traffic could, due to housing and other contemporary difficulties, be easily transferred to areas—such as Coventry—where labour on the railways is especially hard to come by due to competition from more attractive engineering works of various kinds.

On the other hand it may be that the Railway Executive feels that it cannot spend the little money it is allowed for capital expenditure, on the less profitable branch lines. In this case it is reasonable that the main line traffic should receive the majority of money available for maintenance and such new works as are authorised. But if this is the case, then it might well be in the interests of the Railway Executive to say so in order that in after times it may not be blamed for what was not its responsibility.

It is from time to time asserted that certain branches must be closed because, due to changed conditions, they can no longer be made to serve useful purposes. In some cases this is undoubtedly true: but it should not blind those responsible for deciding whether branches should be closed or not to the fact that changed conditions may well be served by changed railway methods.



L. & N.W.R.: Up Irish Mail near Kanton. 15 coaches hauled by superheater 'Precursor' No. 564 Erebus.

C. Laundry.

Common User Duty.

LOCOMOTIVE CAUSERIE No. 134. By O. S. NOCK, B.Sc. A.M.I.C.E. M.I.Mech.E. A.I.Loco.E. M.I.R.S.E.

All the photographs, except the one above, were taken in June, 1950 by E. D. BRUTON.

IT IS ONLY NATURAL THAT THE FIRST RECORDED performances of the new standard locomotives should receive fairly critical scrutiny by all who take an interest in train running. These are the engines on which the future motive power of the world's largest railway system is to be based; these are the engines built to embody all that was best in the locomotive practice of the old companies. Apart from occasional trips on other parts of the national system the 'Britannia' class 4-6-2s have been seen so far only on the old Great Eastern line, but already they seem to have settled down, and are maintaining the fastest timings ever booked over the Colchester main line. A friend has sent me details of a run with No. 70011 *Hotspur* on the 5.30 p.m. out of Liverpool Street and some high speed was run in places, but in the moderate loading of the fastest of the new trains a great contrast is seen to previous conditions on the Great Eastern Railway. In those far-off days when it was worked by non-superheater 4-4-0s of the 'Claud Hamilton' class the famous 1.30 p.m. Norfolk Coast Express was never loaded to less than 330 tons behind the tender, and at summer week-ends often went over the 400 mark. Then the 112.9 miles from Liverpool Street to passing Trowse Upper Junction—just outside Norwich—were booked to be covered in 134 minutes. In later years the Hook of Holland boat express was booked to pass Manningtree (59.5 miles) in 70 minutes, and on this train the G.E.R. superheater 4-6-0s kept time with loads up to 460 tons. With such past achievements in view a present-day observer must be pardoned if he regards the standard load of the new expresses, 300 tons

tare, as somewhat light, especially when they are worked regularly by 'Pacifics.'

Another friend has written to me in rather similar strain about the test run of No. 70009 *Alfred the Great*, between Rugby and Euston, referred to last month. He recalls not only the magnificent work of the Bowen Cooke superheater engines, often with loads nearly as great as that worked by the new 'Pacific,' but that a Webb four-cylinder compound—by a strange coincidence No. 1941 *Alfred the Great*—ran a train of 460 tons tare and at least 480 tons gross over the 77.2 miles from Rugby to Willesden in 85 min. 42 sec. start to stop. It is true this run was made after Mr. Whale had altered the valve gear, by putting on a separate set for the high pressure cylinders instead of the previous conjugated arrangement. But it was a somewhat staggering achievement for one of those engines to sustain 47 m.p.h. with such a load up the 1 in 330 from Cheddington to Tring, and to be so little winded after this as to sustain 70 m.p.h. for mile after mile on the descent towards Watford. One of the illustrations in this article shows a typical scene on the old L. & N.W.R., with a superheated 'Precursor' hauling the up Irish Mail with a 15-coach load—some 445 tons tare, and about 470 gross. Notice also the ample supply of coal left on the tender with the train less than 10 miles from journey's end!

But there is a great difference between the running conditions of those days, and those prevailing now, on both the Great Eastern and the North Western lines—and indeed almost everywhere else in the country. At that time engine workings were very carefully regulated.

Picked engines were allocated to the crack jobs; many of the drivers had engines entirely to themselves, though this practice had long since ceased to apply on the large majority of London and North Western workings. Crewe was actually getting a very high annual mileage out of 'Precursors,' 'Experiments,' and 'George the Fifths' in years prior to 1914, though rostering was regulated so as to have engines in good nick for the hardest duties. It is in this latter respect that conditions are becoming so different to-day. The aim seems to be to eliminate any form of selection in the arrangement of engine workings. If, shall we say an Eastern, or North Eastern Region job is booked for a 'B1' 4-6-0, then any 'B1' on hand can be put on, irrespective of whether it is in good or run-down condition. This, of course, means that the job itself must be within the capabilities of a run-down engine. It is safe to say that many schedules of the past, such as the pre-1914 Norfolk Coast Express, the 2 p.m. from Euston, as between Crewe and Carlisle, and many others worked by relatively small engines would have been impossible to maintain if the use of engines run-down to the extent that many are in express service to-day had been permitted.

In this respect one must be careful to distinguish between an engine that has covered a high mileage, and one on which wear has developed in the motion pins, there is play in the axle boxes, and the whole action is harsh and uncomfortable. Engines in the old Norfolk Coast Express link were most carefully maintained right

up to the time of general overhaul, and they remained on important duties. On the North Western, particularly at sheds like Crewe North, where the common-user principle was even then in force, this was not so, however, and many of the express engines got terribly rough. Careful maintenance was not confined to the days prior to 1914. The stud of 'A4' Pacifics stationed at Kings Cross up to 1939 was looked after like the crack Great Eastern 'Claud Hamiltons' 30 years previously; those 'A4s' worked on the "Coronation," the "West Riding," and the "Silver Jubilee" right up to the time they went to Doncaster for general repairs, and I need hardly say that the standard of performance on those streamlined trains was something of which the like has not been seen since!

Nowadays schedules have to be fixed largely to suit run-down engines, and where improved service is to be provided, as in East Anglia, very much larger engines have to be used to make sure of things. Running to-day is so often well below the optimum, let alone the maximum capacity of the locomotives employed that observers taking notes from the carriage may be excused if they form the opinion that modern engines are incapable of anything better, or that in some way performance of some well-known class has deteriorated with the passing of the years. Then one records a run like that of *Fowey Castle* on the up Merchant Venturer, described last month, when a load of 445 tons was run steadily at 75 m.p.h. on a level track for some 20 minutes on end, and one gets a glimpse of what modern locomotives could

Common user duty: Cl. '5' 5148 on 3.50 p.m. Carlisle - Broad St. express freight on 1-106 climb just south of Shap Station.





Common user duty: A clean Black Five (45433) on express near Berkhamsted.

always do, if the rostering was regulated as in the palmiest of pre-1914 days.

In making comparison between individual engine performances it is very difficult to avoid bringing in some element of inequality, and following the table of Great Western runs between Exeter and Taunton published in my July article Dr. W. A. Tuplin has written to say that he feels my rough assessment of haulage effort, namely multiplying the load by the average speed, is apt to be misleading; on the basis of mean drawbar horsepower between Exeter and Whiteball Summit his calculations show that the Gas Turbine engine beat *Taunton Castle* for second place. His further point, regarding the ratio of drawbar horsepower to grate area raises a wider issue, and I hope to discuss this in some detail in a later article. While I agree with Dr. Tuplin that the product of speed and load as a means of comparing individual efforts is not strictly accurate it does give a reasonably good *rough* guide especially where trains are climbing a gradient. For example in working a 300-ton train up a gradient of 1 in 200 at 55 m.p.h., the draw-bar horsepower, as derived from using the Johansen formula for train resistance, is 955. If to obtain the corresponding horsepower at 65 m.p.h. this figure is increased in direct proportion the result is 1125, whereas a separate calculation, again using the Johansen formula, gives 1205—not such a very big difference. In the case of level track the difference is more marked. With a 450-ton train the separate calculated figures are 694 at 55 m.p.h. and 937 at 65, whereas if 694 is increased in direct proportion to the speeds the 65 m.p.h. figure becomes only 821. I am grateful to Dr. Tuplin for drawing attention to this point.

From various friends I have recently received some interesting details of work with the Stanier class '5' 4-6-0s, and in view of my earlier references to the extensive and indiscriminate use of engines in the 5MT category some notes of running in widely different conditions will serve as a foretaste of what we may expect in years to come, when the new standard Class '5'

4-6-0s, generally derived from them, are in use in most parts of the country. As an example of the L.M.S. engines at their finest, in heavy grade work rather than high speed, a run on the 11.58 a.m. from Perth to Aviemore would take a good deal of beating. Mr. Ronald I. Nelson was privileged to ride on the footplate, and a very complete record of the engine working is thus available. With no more than 10 coaches, 312 tons tare, 330 tons full the going out to Blair Atholl was not too severe; but the engine concerned, No. 44704, was beautifully handled by Driver Traill of Perth shed, and he not only kept just comfortably ahead of time on all sections but did so on the excellent water consumption of 38 gallons per mile, throughout from Perth to Aviemore. It is true that banking assistance was taken from Blair Atholl to Dalnaspidal, but even with this help the train engine was working in 30 per cent cut-off with full regulator for 34 minutes on end.

On the opening run from Perth to Blair Atholl great care was taken in negotiating the various passing loops, as I noticed myself when I travelled over this same route last year. Speeds of 40 m.p.h. through Murthly, 44 at Dunkeld, 43 at Dalguise, and 45 at Ballinluig, were in marked contrast to the way the old Highland engines used to go bucketing through the loops. It needed smart recovery of speed afterwards, with hard engine working, to get 4 minutes in hand by Pitlochry to help offset a permanent way check on the stiff climb into the Pass of Killiecrankie. The time of 39 min. 46 sec. for the 28.5 miles from Perth to passing Pitlochry was excellent, and included, among other stout efforts, no greater fall in speed than from 40 through Murthly to 34 m.p.h. at Kingswood Crossing up $2\frac{1}{2}$ miles of 1 in 80. The most strenuous effort was in recovering from the Pitlochry slack, on full regulator and 37 per cent cut-off up the 1 in 85, with speed rising from 20 to $25\frac{1}{2}$ m.p.h., and further to $29\frac{1}{2}$ m.p.h. on the last $\frac{3}{4}$ mile to the summit in the Pass. Thus despite the check the 35.3 miles from Perth to Blair Atholl were covered in 51 min. 4 sec.—4 minutes early arrival.

Rear-end banking assistance up to Dalnaspidal was provided by a Caledonian Pickersgill 4—4—0, No. 54500, and in about half a mile from the start cut-off was fixed at 30 per cent on No. 44704. In the first $4\frac{1}{2}$ miles of ascent, to Struan, there are some breaks in the grading, and at one point speed rose to 42 m.p.h.; but in the 9 miles between posts 40 and 49 the inclination is almost continuously 1 in 70 and over this 9 miles the two engines averaged 29.2 m.p.h., with an absolute minimum of 28. The banker dropped off at Dalnaspidal, and on the short stretch at 1 in 307 past that station speed rose to 46 m.p.h. before the last mile at 1 in 78 to the summit brought the engine down to 37. Except for a stretch of 2 miles on the 1 in 70 where cut-off was temporarily increased to 35, 30 per cent was used throughout. The engine steamed well, and pressure did not drop below 200 lb. per sq. in. at any point on the climb. Time was being closely maintained; Dalnaspidal (15.7 miles) was passed in 31 min. 6 sec., nearly a minute early, and the downhill run to Kingussie included some good speed, up to 72 m.p.h. north of Dalwhinnie, though that same caution through the crossing loops that had been displayed south of Blair Atholl was again in evidence. In all the 36.3 miles from Blair to Kingussie took 56 min. 11 sec. start to stop, against 59 min. booked. The short concluding run of 11.7 miles from Kingussie to Aviemore took $16\frac{1}{2}$ min. despite a permanent way slack to 20 m.p.h. intermediately.

From the Highland we move to the North Warwickshire line of the former G.W.R., over which Stanier

4—6—0s, and their drivers, have been working through on Sunday excursion trains. Mr. J. C. Keyte has recently clocked two most interesting runs on the north-bound journeys. From Stratford-on-Avon to Birmingham this is a hard road, with $1\frac{1}{4}$ miles at 1 in 75 soon after starting, and then, after 3 miles of gentle descent, the $9\frac{1}{4}$ miles of Henley bank— $7\frac{1}{4}$ at 1 in 150, and the last two at 1 in 181. On the first run No. 45256, with an Edge Hill driver, had an 11-coach train, 336 tons tare, 355 tons full. Speed fell to 25 m.p.h. on the 1 in 75 to Wilmcote; a maximum of 58 was touched near Wootton Wawen, and the minimum up the bank was 39 m.p.h. So the summit point, at Earlswood Lakes station was passed in 22 min. 53 sec. (14.8 miles) and a gentle downhill run through the outer suburbs of Birmingham brought the train to a stop at Tyseley (21.6 miles) in 31 min. 24 sec. from Stratford. This was quite a good effort for a strange driver; the pilotman, by the way, was from Crewe W.R. shed.

On the second run one of the Caprotti-valve class '5' 4—6—0s was used, No. 44749, with a Longsight driver, and the load was slightly heavier, being 345 tons tare and about 365 tons gross behind the tender. These Caprotti engines have the reputation of being slow starters; this I would confirm from my own experience on the foot-plate and otherwise, and certainly No. 44749 was sluggish in the extreme getting away from Stratford. She took 7 min. 42 sec. to pass Wilmcote (2.6 miles) against the 6 min. 33 sec. of the ordinary class '5' in the previous run, and speed did not exceed $55\frac{3}{4}$ m.p.h. before

Common user duty: Cl. '5' 45296 banked by Cl. '4' 42404 on the down 11.36 a.m. F.F.2 from Garston south of Scout Green.



Wootton Wawen. Mr. Keyte comments: "The time of 14½ min. to Henley is the slowest I have ever known. By that time, however, the crisp Caprotti bark was decidedly in evidence. Successive lengthening of the cut-offs produced a crescendo, causing, first, looks of disapproval and then headlong flight on the part of the local cattle and poultry, which are numerous hereabout. The din in Wood End tunnel was quite infernal." The result was a fast climb with a minimum speed of 41½ m.p.h. and an acceleration to 46 at Earlswood Lakes. Due to the slow start, however, the time to this summit point was a minute longer than that of No. 45256. By way of comparison two recent runs on the Penzance-Wolverhampton through express may be mentioned. No. 7026 *Tenby Castle* with a load almost exactly the same as that of the visitors, passed Earlswood Lakes in 21 min. 35 sec., not falling below 43 m.p.h. on the bank; and, with a top speed of 72 m.p.h. at Yardley Wood, Tyseley was passed—dead slow—in 29 min. 3 sec. Then No. 5029 *Nunney Castle* gave a most polished display with a load of 389 tons tare, 410 tons full. Mr. Keyte made this journey two days after his experience with the Caprotti 4—6—0, and it was certainly a contrast to pass

Henley in 11' min. 47 sec. and in relative quietness to breast Earlswood Lakes in 21 min. 20 sec.—the fastest time of all four runs, despite the heaviest load. But of course the "Penzance" was in the hands of a regular Western Region express driver, and received the usual banking assistance just out of the platform at Stratford-on-Avon, which for some reason was not forthcoming on the L.M. return excursion trip. This help just at the start, might make a difference of about a ½ min., but not more.

I have noted some very good running this summer over the West of England main line of the Midland; for although this route, like many others, has been heavily beset by permanent way slacks much of the locomotive work has been keenly enterprising. Most of my runs have been made with class '6' 3-cylinder 4—6—0s, but one evening when I was on the 7.20 p.m. mail from Bristol we had a class '5', No. 44843 with a 10-coach train of 315 tons all told. We had four permanent way slacks between Mangotsfield and Gloucester, and so took 40½ min. for this 31.5 mile run, instead of the 35 min. booked. But we regained a minute by a fine uphill acceleration between Gloucester and Cheltenham—6.5

Common user duty: 45256 on 2.25 p.m. express freight from Carlisle to Edge Hill near Shapbeek Cottages, Thrimby.



and in relative quietness to 1 min. 20 sec.—the fastest the heaviest load. But of n the hands of a regular r, and received the usual the platform at Stratford-on was not forthcoming p. This help just at the of about a $\frac{1}{2}$ min., but

ning this summer over the Midland; for al-ers, has been heavily ch of the locomotive

Most of my runs under 4—6—0s, but 20 p.m. mail from 3 with a 10-coach ur permanent way ester, and so took d of the 35 min. by a fine uphill Cheltenham—6.5

rimby.

miles in 11 min. start to stop, and after very smart handling of the mail traffic got away from Cheltenham 4 min. late. Admittedly the timing is not difficult, but the driver went for it, with the result that we were on time less than 20 miles out of Cheltenham. Accelerating down the 1 in 300 from the start we passed Ashchurch (7.3 miles) in 8 min. 20 sec. at 77 $\frac{1}{2}$ m.p.h.; 72 to 73 m.p.h. was sustained to the crossing of the Avon at Defford, and then the 5-mile rise to Abbotswood Junction, mostly at 1 in 385-300, was cleared at 64 m.p.h., and our time to this point—just 18 miles out of Cheltenham

—was the remarkable one of 17 min. 38 sec. The gradually rising length on to Bromsgrove South, 13.2 miles, was covered in 13 min. 40 sec. to the stop, so that we had made an average of all but 60 m.p.h. from Cheltenham—31.2 miles in 31 min. 18 sec. Two 0—6—0 tank engines pushed us vigorously up the Lickey Incline and despite much easy running afterwards, and two slight signal checks, we reached Birmingham in 61 min. 5 sec. from Cheltenham, 45.5 miles—2 min. early. This was a fine example of what the class '5' engines can do in express passenger service.

BRITISH TRAIN SERVICES

No. 4. The services of 1851 and 1951 compared.

By V. Stewart Harem.

Part 2. Railways to the East Coast, the North and Scotland.

On Page 190 is published a reproduction of a typical 1851 timetable.



THE GREAT EASTERN RAILWAY, AS SUCH, DID NOT EXIST in 1851, although its two chief components, the Eastern Counties and Eastern Union had been operating for some years. Both the routes between London and Norwich namely via Cambridge and Colchester were completed before 1851, and in that year the fastest train, first-class only, at 7.0 a.m. from Norwich via Cambridge took 4 hrs. to London, 126 miles. The quickest down train, 5.0 p.m. from Shoreditch reached Norwich at 9.25 p.m., while the 11.30 a.m. was booked in 4 $\frac{1}{2}$ hrs. By the mail at 9.0 p.m. passengers reached Norwich 2.28 a.m. In all cases about an hour was added to the journey to or from Yarmouth or Lowestoft. Nowadays all the quickest trains between London, Norwich, Yarmouth and Lowestoft travel via Colchester and the service over the Cambridge route is of secondary importance.

The fastest train from Cambridge to London, 57 $\frac{1}{2}$ miles, was the 9.15 a.m. allowed 1 $\frac{1}{2}$ hrs. with three stops. It was possible to reach London at 10.0 a.m. by leaving Cambridge at 7.15 a.m. Returning from London there was a choice of evening trains to Cambridge at 4.0 p.m., 5.0 p.m. (1 hr. 55 min.), and 9.0 p.m. The 11.30 a.m. from Shoreditch took 1 hr. 55 min. with four stops, and both the 8.0 a.m. down and 5.0 p.m. up trains, with five and six intermediate calls respectively, were allowed 2 hrs. between London and Cambridge. In the present service the "Fenman" leaving Cambridge at 8.48 a.m. is due Liverpool Street 10.3 a.m., and the corresponding down train at 4.30 p.m. reaches Cambridge 5.50 p.m. and a number of trains are only slightly slower.

In 1851 Hertford was within an hour of London by the 9.30 a.m. up train, while in several cases the journey occupied only 5 min. longer. To Broxbourne, 19 miles from Shoreditch, there was a non-stop run of 36 minutes by the 4.0 p.m. train. The fastest booking between Hertford and Liverpool Street to-day is 53 minutes, which includes a change at Broxbourne.

The service in 1851 between London and Norwich via Colchester was poor. It was not possible to reach London before 12.50 p.m. entailing a departure from Norwich at 7.15 a.m., moreover the fastest trains, 11.0 a.m. and 3.0 p.m. from Shoreditch required 4 hrs. 50 min. to cover 113 $\frac{1}{2}$ miles. The latest departure at night, 5.30 p.m. from London took 5 hrs. The present service provides for four down and three up expresses between Liverpool Street and Norwich in 2 hrs. 10 min. with one stop at Ipswich, besides a number of others almost as fast. The quickest schedules between London and Yarmouth or Lowestoft are 2 hrs. 39 min. and 2 $\frac{1}{2}$ hrs. respectively.

From Ipswich to London in 1851 there were morning trains at 7.5 a.m. and 9.30 a.m.; these left Colchester at 7.45 and 10.25 and were due Shoreditch at 10.5 a.m. and 12.50 p.m. respectively. An additional service ran on Mondays from Colchester at 6.45 a.m. reaching London 9.0 a.m. Return services at night left Shoreditch for Colchester and Ipswich at 5.30 and 8.30 p.m., both taking over 3 hrs. to the latter. The fastest booking to Ipswich was 2 $\frac{3}{4}$ hrs. by the 11 a.m. and 3 p.m. trains from Shoreditch. This compares with the present best timings between Liverpool Street and Ipswich, 68 $\frac{1}{2}$ miles, of 1 hr. 16 min. down and 1 min. longer in up direction.

There were only eight up and nine down trains between Ilford and London in 1851; the first up left Ilford at 8.34 a.m. and the last down departed from Shoreditch at 10.0 p.m. What a difference from the service provided to-day! Trains ran every half hour throughout most of the day between London and North Woolwich whence steamers plied to and from Woolwich, Gravesend, etc. By the London and Blackwall Railway a service of trains operated every quarter of an hour from 8.0 a.m. to 10.30 p.m. between Fenchurch Street and Blackwall, a facility withdrawn at the time of the General Strike in May, 1926.

The Great Northern main line, extending from a temporary terminus in London at Maiden Lane to Werrington Junction Peterborough, had been opened in 1850, but until the direct line between Peterborough and Retford was brought into use two years later a somewhat circuitous journey through Spalding, Boston and Lincoln was made by East Coast trains. By this route Doncaster was 174½ miles from London compared with the present mileage of 156. Leeds, approximately 205 miles from Maiden Lane, was reached via Askern and Knottingley to the then recently opened Central Station; while to York the route lay through Knottingley and over the York and North Midland Railway via Burton Salmon.

In August 1851 the fastest train from Maiden Lane to York at 9.15 a.m. took 5 hrs. 35 min. for the 209½ miles with 9 stops, while the best timing up at 4.10 p.m. was 15 minutes slower; first class passengers only were conveyed. There was a train from London at 5.0 p.m. booked in 6 hrs. 40 min. to York and one in the reverse direction leaving at 9.0 a.m. allowed 6 hrs. 10 min., to both of which second class passengers were admitted. To and from Leeds the quickest schedules were 9.15 a.m. down 5½ hrs. and 4.15 p.m. up 5½ hrs. At present the best daily timings between Kings Cross and York, 188.2 miles, are 3½ hrs. down by the 9.40 a.m. and 3 hrs. 35 min. by the 1.42 p.m. up train, in both cases non-stop, although the down "Scarborough Flyer," running two days a week, performs the journey in 3 hrs. 29 min. including a stop at Grantham. Leeds, 185½ miles, is reached non-stop from London in 3 hrs. 25 min. by the 12.0 noon Pullman Car "Queen of Scots" and the corresponding return service at 4.39 p.m. takes one minute longer. A day can be spent in London by leaving Leeds at 7.20 a.m. due Kings Cross 11.31 a.m. and returning from Kings Cross at 6.18 p.m. arriving Leeds 10.51 p.m.

The fastest train in 1851 from London to Lincoln took 3 hrs. 34 min., but to come to London for the day entailed a departure from Lincoln at 5.50 a.m., a journey occupying well in excess of 5 hrs., otherwise it was not possible to reach London before 3.10 p.m. The 5.0 p.m. train from Maiden Lane reached Lincoln in 4 hrs. and there was a 9.15 p.m. which gave an arrival at 2.0 a.m. To-day Lincoln is served via Grantham in about 3 hrs. Between Boston and Grimsby, 47½ miles, the quickest train, the up mail, took 1 hr. 33 min. From Grimsby to London the fastest service was 4½ hrs. compared with the existing best of 3 hrs. 50 min. up and 3 hrs. 35 min. down. A route to Hull was afforded by using Manchester Sheffield and Lincolnshire Railway metals from Grimsby to New Holland and thence the Humber Ferry. It brought Hull within 6 hrs. of London in each direction.

The 9.15 a.m. from London gave the quickest booking to Peterborough (1 hr. 50 min.) with stops at Hitchin and Huntingdon while the 8.0 p.m. up train with the same stops was allowed 10 minutes longer to London. A visitor to London for the day could leave Peterborough at 7.0 a.m. or 8.23 a.m. due Maiden Lane 10.0 or 11.15 a.m. respectively. Returning at night there was a choice of trains at 5.0 p.m. (2 hrs. 5 min.), 6.0 and 8.0 p.m. both slow, and 9.15 p.m. (2 hrs. 40 min.). At present there are non-stop trains from Kings Cross to Peterborough in 1 hr. 24 min.

The line from Hitchin to Cambridge in August 1851 extended only as far as Royston whence a coach plied to and from Cambridge in connection with the train. The quickest service from London took 1½ hr. to Royston and 2 hrs. 10 min. to Cambridge compared with the best to-day of 1 hr. 9 min. down, operating thrice weekly, with an up booking of 1 hr. 7 min. in respect of Royston, and 1 hr. 25 min. down with 5 minutes less in the up direction to and from Cambridge. 42 min. was the fastest booking to Hitchin from London by the 9.15 a.m., while the 9.15 p.m. took 3 minutes longer, in both cases without a stop. To Hatfield the best timing was 30 min. non-stop, performed by the 11.0 a.m. and 5.0 p.m. trains from Maiden Lane.

The following table shows the fastest schedules over the East Coast route operating in August, 1851 and at the present day between London and certain towns served by the York and North Midland and York Newcastle and Berwick railways.

	DOWN.		UP.	
	1851.	1951.	1851.	1951.
Harrogate	... 8h. 10m.	4h. 3m.	7h. 20m.	4h. 6m.
Hull	... 6h. 30m.	3h. 56m.	7h. 0m.	4h. 2m.
Scarborough	... 8h. 5m.	4h. 28m.	8h. 25m.	4h. 45m.
Darlington	... 7h. 5m.	4h. 5m.	7h. 45m.	4h. 0m.
Newcastle	... 8h. 10m.	4h. 52m.	8h. 45m.	4h. 45m.
Berwick	... 10h. 15m.	6h. 52m.	10h. 40m.	6h. 43m.

In most instances the 1851 timings were performed by the 9.15 a.m. from Maiden Lane and the corresponding up train due London at 10.0 p.m.

The fastest booking from York to Darlington one hundred years ago was 65 min. for the 44.1 miles compared with the existing best of 43 min. performed in the reverse direction. From York to Scarborough, 42½ miles, one train took 1 hr. 25 min. with two stops. There was an hourly service of trains with an increased number on Saturdays between Newcastle and Tynemouth. The Stockton and Darlington Railway provided six trains each way between Darlington and Stockton, allowed half an hour for the journey and Redcar could be reached from Darlington in one hour; to-day the fastest train occupies 44 min. The Newcastle and Carlisle Railway ran five trains in each direction between Newcastle and Carlisle; most of these called at all the twenty intermediate stations and took about 3 hrs. on the journey, although one train, the mail, omitted three stops and was allowed 2 hrs. 40 min. for the 60 odd miles. To-day the once weekly through train between Newcastle and Stranraer Harbour runs non-stop to and from Carlisle in 1 hr. 25 min., while certain other trains are booked in 1½ hr. or a few minutes longer.

By the East Coast route to Scotland the fastest schedules in August, 1851 between London and Edinburgh were 11 hrs. 55 min. down and 12½ hrs. in the up direction, performed by the day train conveying first class passengers only; 1½ hr. were allowed between Berwick and Edinburgh, 57½ miles, with a stop at Dunbar. Third class passengers could leave Maiden Lane at 9.15 p.m. but did not reach Edinburgh until 2.20 p.m. Nowadays the "Capitals Limited" is booked non-stop in each direction between London and Edinburgh in 7 hrs. 20 min., while Aberdeen, to which there was no reasonable service in 1851 by the East Coast, is just over 11 hrs. from Kings Cross. In pre-war days by the

"Coronation" (supplementary charges) Edinburgh was within 6 hrs. of London.

A hundred years ago Euston was, as it still is, the main gateway to the north, but in those days this factor was all the more marked, for, the Midland Railway had not reached London and besides serving north and north-west England, Euston handled all traffic between London and the Midlands and to a lesser degree the north-east via Normanton and York. The distance to the latter from Euston was approximately 10 miles further than by the East Coast route from Maiden Lane.

Dealing first with purely London and North Western Railway services it is noted that from Birmingham to London there were nine trains daily of which the fastest at 7.40 p.m. covered the 112½ miles in 2 hrs. 50 min. with stops at Coventry and Wolverton. It was possible to leave Birmingham at 7.30 a.m. or Wolverhampton 7.0, and reach Euston 10.30 a.m., but both these trains conveyed passengers at express fares only. A train left Birmingham at 9.5 a.m., first and second class, due Euston at 1.0 p.m., but with these exceptions all trains took over 4 hrs. Third class passengers from Birmingham at 8.0 a.m. did not arrive London until 2.15 p.m. Two trains at express fares from Euston at 9.15 a.m. and 5.0 p.m. were booked to Birmingham in 3 hrs., the former with five intermediate stops and the latter with three. Other evening services from London left at 5.30 p.m. and 9.0 p.m. both allowed about 4½ hrs. to Birmingham. The fastest schedule to-day between Euston and Birmingham is 2 hrs. 10 min. with a stop at Coventry; although prior to the war a number of trains took 1 hr. 55 min. calling at either Willesden or Coventry and there was a two-hour train with 3 intermediate stops.

Rugby, 82½ miles, was within 2 hrs. 5 min. of London in 1851 by one up and two down trains. Passengers visiting London for the day had choice of trains at 6.45 a.m. slow, and 8.20 a.m. (2 hrs. 10 min.) with return services at 5.0 p.m. (2 hrs. 5 min.), 5.30, 8.45 or 9.0 p.m.

There were fast trains from Bletchley to London at 9.15 a.m. and 10.55 a.m. allowed 1½ hr. and 1 hr. 20 min. respectively; to-day the fastest schedule is 52 min. The quickest services between Bedford and Euston were 10.15 a.m. up (2 hrs.) and 3.30 p.m. down (1 hr. 55 min.). It was possible to reach Aylesbury in 1½ hr. from Euston by the 3.30 p.m., a train which ran non-stop to Tring in 45 min.; at the present time the best service between Aylesbury and Euston is 1 hr. 27 min. operating on Saturdays only. Watford, 17½ miles, was reached non-stop in 25 min. from Euston by the 9.15 a.m., while the 4.0 p.m. down with a stop at Harrow took 5 min. longer. The morning service from Watford to London comprised trains at 8.18, 9.0, 9.30 and 10.36 a.m. with evening trains from London at 4.0, 5.5, 5.30 6.0, 8.45 and 10.30 p.m. In all there were 17 up and 15 down trains between Watford and Euston; to-day the numbers are approximately 120 trains to either Euston or Broad Street and 129 in the reverse direction but the quickest timings maintained by three up and two down trains have only been reduced to 21 and 23 minutes respectively.

Going further afield we find that in August, 1851 the earliest arrival at Euston (apart from the overnight mail) from Crewe or beyond was at 1.0 p.m. which involved

departures from Liverpool at 6.0 a.m., Manchester 6.15, Chester 6.30 and Crewe 7.24 a.m. The fastest schedules from Liverpool and Manchester to London were 5½ and 5¼ hrs. respectively by a train running via Birmingham due Euston at 10.30 p.m. From Crewe to London the best service was 4 hrs. 35 min. with an hour longer from Chester, maintained by the Scotch express which ran via the Trent Valley line and reached London at 11.0 p.m. From Euston the 9.30 a.m. via Trent Valley took 5 hrs. 50 min. to Liverpool and the 5.0 p.m. train via Birmingham was 10 minutes longer. The 9.30 a.m. also gave the fastest booking to Crewe and Chester, 4 hrs. 10 min. and 5 hrs. 20 min. respectively; but to Manchester the best train was the 5.0 p.m., allowed 5 hrs. 40 min. At the present time there is a service in each direction between Euston and Crewe in 2 hrs. 52 min. From Chester the "Irish Mail" reaches London in 3 hrs. 28 min. and there is a down booking, with a change at Crewe, almost as fast. On the London and Liverpool service six trains make the run in 3 hrs. 40 min. to 3 hrs. 46 min.; while on the Manchester route the up "Mancunian" takes 3 hrs. 35 min. and the corresponding down train together with the "Comet" in the up direction are allowed 5 minutes longer; moreover on Saturdays the latter train travelling north is booked to Manchester in 3 hrs. 37 min.

A century ago passengers by the day "Irish Mail" left Euston at 9.30 a.m. reached Holyhead at 5.15 p.m. and Kingstown 10.0 p.m.; 2 hrs. 20 min. were allowed for the 84½ miles from Chester to Holyhead with four intermediate stops. By the night services at 5.0 and 8.45 p.m. from London the schedules to Kingstown were 13½ and 14½ hrs. respectively. Nowadays the day service from Euston at 8.10 a.m. is due Kingstown 5.45 p.m. while the night journey is 20 minutes longer.

Between Shrewsbury and London the fastest service in August, 1851, namely about 5 hrs. was given by the Shrewsbury and Birmingham Railway via Wolverhampton, where a change of stations was necessary. By an alternative route via Stafford and the Shropshire Union Railway the journey occupied about 5½ hrs.

A comparative table gives the quickest time in August, 1851 and to-day between London and some towns served by the L. & N.W. route and railways in connection:

	DOWN.		UP.	
	1851.	1951.	1851.	1951.
Stoke ...	4h. 50m.	2h. 49m.	4h. 35m.	2h. 38m.
Huddersfield ...	6h. 40m.	4h. 42m.	6h. 35m.	4h. 45m.
Bolton ...	7h. 0m.	4h. 45m.	6h. 20m.	4h. 39m.
Preston ...	5h. 55m.	4h. 25m.	6h. 15m.	4h. 15m.
Blackpool ...	6h. 50m.	5h. 19m.	7h. 30m.	5h. 11m.
Lancaster ...	6h. 33m.	5h. 1m.	7h. 5m.	4h. 44m.
Carlisle ...	8h. 40m.	5h. 8m.	9h. 7m.	6h. 12m.

N.B.—The Bolton times of 1851 are via Kenyon Junction and those of to-day via Manchester Victoria. Preston 1951 down schedule is a few minutes faster on Saturdays. Blackpool 1951 is 28 mins. quicker down and a few minutes faster up on Saturdays.

Between Euston and Scotland the fastest 1851 schedules were as follows: Glasgow 12 hrs. 20 min.; Edinburgh 12 hrs.; Perth 13½ hrs., Aberdeen 16½ hrs. To-day the best times to Glasgow and Perth are 8 hrs. and 9 hrs. 29 min. respectively, although before the war Glasgow

351.

6m.
2m.
43m.
0m.
45m.
43m.

med by
ponding

gton one
niles com-
formed in
rough, 42½
ops. There
sed number
outh. The
d six trains
allowed half
d be reached
: fastest train
rblisle Railway
Newcastle and
e twenty inter-
on the journey,
three stops and
odd miles. To-
etween Newcastle
p to and from
n other trains are
onger.
otland the fastest
London and Edin-
and 12½ hrs. in the
train conveying first
re allowed between
with a stop at Dun-
leave Maiden Lane at
burgh until 2.20 p.m.
i" is booked non-stop
ion and Edinburgh in
to which there was no
the East Coast, is just
In pre-war days by the

was within 6½ hrs. of London by the "Coronation Scot" (supplementary fares) and 7 hrs. by the "Royal Scot." No through service is provided to-day from London to Edinburgh or Aberdeen by the West Coast.

Traffic between London and the Midland Railway main line in 1851 passed via Rugby. There was a train leaving Derby and Nottingham at 6.0 a.m. and Leicester 7.15 a.m. due Euston at 10.30 a.m. The next train, 10.0 a.m. from Leicester did not arrive in London until 2.45 p.m. A return service at 5.0 p.m., first class (4.0 p.m. second class) from Euston gave arrivals at Leicester 7.45, Derby 8.50 and Nottingham 8.55 p.m., while the mail from London at 9.0 p.m. reached Leicester 12.45, Derby 1.55 and Nottingham 2.55 a.m. By the best service, 9.15 a.m. from Euston, Leicester was within 2 hrs. 40 min., both Derby and Nottingham 3 hrs. 25 min., Sheffield 4½ hrs., York 5 hrs. 40 min. and Leeds 5½ hrs. The corresponding up train was slightly slower. It will be seen that the schedule to York was only five minutes longer than that of the East Coast route. Midland access to Sheffield was by means of the erstwhile Sheffield and Rotherham Railway. A comparison of these timings with the best operating to or from St. Pancras to-day shows Leicester as within 1 hr. 55 min., Derby 2 hrs. 37 min. (2 minutes quicker on Saturdays), Nottingham 2 hrs. 24 min., Sheffield 3 hrs. 34 min. and Leeds 4 hrs. 43 min. But present Midland schedules are at a depressingly low ebb when it is remembered that at one period

the Leeds to St. Pancras run was made in 3 hrs. 33 min.

Between Mansfield and London the quickest booking in August, 1851 was 4 hrs. 55 min. up but nearly 2 hrs. longer in the down direction. The Erewash Valley line extended only as far as Codnor Park; while Rowsley, 4 hrs. 40 min. from Euston, was the nearest railhead of the Midland to Buxton to which a coach ran twice daily. North of Leeds there was an hourly service of trains to and from Bradford, the majority took 45 min. calling at the six intermediate stations, but two trains were booked in half an hour with fewer stops. Lancaster via Skipton was within 2 hrs. 25 min. of Leeds compared with 1 hr. 36 min. to-day.

In conclusion the following mixed bag of August, 1851 cross-country schedules may prove of interest: Bristol and Birmingham 3½ hrs.; Crewe and Derby 2½ hrs.; Nottingham and Lincoln 1½ hrs.; Liverpool and Manchester (non-stop) 50 min.; Manchester and Leeds via Huddersfield 1 hr. 40 min.; Manchester and Bradford 1 hr. 35 min.; Manchester and Sheffield 1½ hrs.; Preston and Manchester 1 hr., and in Scotland: Glasgow (Buchanan Street) and Carlisle 3 hrs. 13 min.; Glasgow and Carlisle via Kilmarnock 4½ hrs.; Ayr and Glasgow 1½ hrs.; Edinburgh and Glasgow via Castlecary 1½ hrs.; Perth and Glasgow 1½ hrs.; Perth and Aberdeen 2 hrs. 35 min.; Perth and Dundee West 45 min.

The next article will deal with the London, Worcester, Malvern and Hereford services of the G.W.R.

★ The Isle of Wight System.

R. F. Hathaway.

IN A RECENT ISSUE THERE WAS MENTION OF THE FACT THAT THE Railway Executive may be considering the closure of the entire Isle of Wight railway system. Such an action would be nothing short of a disaster to the tourist trade, which is the island's chief industry. A few minutes' reflection will indicate the absurdity of this policy. The current summer Saturday peak service on the Ventnor line, for example, provides for two trains from Ryde Pier Head to Ventnor, per hour, supplemented by one per hour terminating at Shanklin and one as far as Sandown only. These trains are normally made up to seven coaches, plus a bogie luggage van (well filled), and always carry a full passenger load, often with many standing passengers. The set trains vary slightly as to seating capacity, but most hold something like 620 seated passengers. Allowing for 5 standing in each compartment (a figure often exceeded, since standing loads are often carried in the brake vans as well) this gives a train capacity of 930.

At the height of the two-way Saturday rush we have the following capacity per hour:

Ryde-Sandown: 3,720 passengers (4 x 930),

Sandown-Shanklin: 2,790 passengers (3 x 930).

Shanklin-Ventnor: 1,860 passengers (2 x 930).

If these passengers are all to be conveyed by buses (presumably lowbridge double-deckers, 55 seats plus 5 standing) we shall need the following vehicles per hour: Ryde-Shanklin: 62, Sandown-Shanklin: 46½, Shanklin-Ventnor: 31. Thus, to Sandown, the replacing buses (ignoring the existing frequent bus service) would have to operate over 30 per cent more frequently than the notorious No. 11 route in London—a pretty sight in the narrow streets leading off Ryde Esplanade!

The present Saturday rail service could be maintained with seven trains, and one or two spare locomotives: an adequate

substitute bus service would need at very least 98 vehicles to work it, assuming a schedule speed of 15 m.p.h. could be maintained (which is doubtful, when one sees how slowly existing buses climb the many hills in the Wroxall-Ventnor neighbourhood). The labour cost alone of such a service would be enormous, to say nothing of wear and tear on roads, to be paid for by the already hard-pressed island ratepayers.

Other aspects also have to be considered, such as the conveyance of visitors' luggage, coal and supplies for the towns, and also the little problem of getting passengers from boat to bus at Ryde. The present Pier Tramway already has an "Underground" style rush period on Saturdays, and cannot handle more traffic in its present form. If visitors are to be expected to queue for a pier tram, and then again for a bus, they will not come again. What we need is a closer link with the mainland, in the shape of the Solent Tunnel, not a more awkward boat interchange.

If the proposed closure takes place, resorts such as Freshwater, Sandown, Shanklin and Ventnor will lose trade disastrously, with consequent unemployment and distress. Our bus services are already inadequate to handle summer crowds, even on "cross country" routes such as from Sandown or Ventnor to Newport. Many residents on the east side of the island work in Newport or Cowes, and they may well ponder how they are to get to work if they have no longer the reliable train service on which to depend. I am aware that this letter is inordinately long, but I think that the island closure schemes are but the thin end of the wedge for even bigger things; there are those who stand to gain financially in countries which have "passed out of the railway age." Can any opposition be organised now before this acute "bus mania" has its expensive sting?



'J15' No. 65467 (fitted with windshield on tender) on the Framlingham — Wickham branch train leaving Marlesford station, 21st May, 1951.
Photographed by P. M. Alexander.



M. & G.N. class 'G' No. 1 with short chimney and tablet catcher.

British Railways.

The Locomotives of

The MIDLAND & GREAT NORTHERN JOINT RAILWAY.

Part 9. By Alan M. Wells.

NUMBERS 45 AND 53 WERE REBUILT IN 1910 AND THESE were fitted with boilers of Midland Railway class 'G7' (saturated) with Belpaire fireboxes and all further rebuilds of the class received similar boilers. Flood type injectors replaced the lifting type previously carried and the vacuum ejectors were replaced by a type which combined large and small cones. Incidentally, an independent blower was fitted to these engines. Coal watering pipes were also fitted and a new type tablet catcher was introduced which folded into the side of the tender. This change was probably due to the raising of the footplate height. The sand box on the left side of the tender was converted into an oil cupboard. Nos. 56 and 57 were rebuilt in 1912, 52 in 1913, 54 in 1914 and 46 and 51 in 1915. Nos. 39 and 55 received 'G7' type boilers in 1923 and 1925 respectively. No. 45 replaced No. 39 which since rebuilding had been shedded at Norwich for working the Leicester turn. The engines were excellent steamers but tended to roll badly especially when taking turnouts at speed and at the eastern end of the Yarmouth line. Nos. 45 and 55 were the worst culprits in the matter of rough riding. They could handle very heavy trains with ease and have on a number of occasions astonished the Midland drivers who had worked in trains double-headed to see the same train go forward unassisted over the difficult Eastern Section. The sloping grate required careful firing especially when working heavily as the fire tended to go forward under the brick arch. The boilers were 10 ft. $5\frac{15}{16}$ in. in length with a mean diameter of 4 ft. 8 in. They had 254 tubes of $1\frac{3}{4}$ in. outside diameter giving a heating surface of 1,283 sq. ft. The firebox which had a grate area of 21.1 sq. ft. contributed 127

sq. ft. making a total of 1,410 sq. ft. The working pressure was 175 lb. per sq. in. The centre line of the boiler as in the first two rebuilds was 8 ft 3 in. above rail level. The tractive effort at 80 per cent of the boiler pressure was rated at 16,862 lb. Other useful dimensions were: Height of chimney 13 ft. 3 in., Height of cab roof 12 ft. $5\frac{1}{4}$ in., Width over Cab 6 ft. $11\frac{1}{2}$ in., Over footplate 8 ft. 0 in., and over the steps 8 ft. 7 in.

Nos. 36 and 50 received new boilers in 1929 followed by 6, 44 and 77 in 1930, and these were of the same diameter as the originals but had Belpaire fireboxes. They were of Midland Railway class 'G6.' New cabs of a different design were added with the upright grab iron continued through to the top. The drivers brake valve was placed much higher and considerably spoiled the driving position; as the look outs were much too high to see through, it was necessary for the driver to wedge himself between the reversing handle and the cab side. A larger firedoor than was usual was used and the engines required a thicker fire to maintain steam. Nos. 2 and 49 were similarly treated in 1931. Of the seven engines so fitted only No. 2 retained the Ross pop safety valves and the others were soon changed for the Ramsbottom type as were the 'G7s' so fitted. Incidentally, Nos. 36 and 50 had two mud doors on each side of the firebox whereas the later boilers had four plugs for washing out and inspection purposes. The grate area, heating surface and boiler pressure remained the same as in the M. & G.N. type boilers previously fitted.

During 1935 and 1936 Mr. Nash made some alterations to the class. A much-needed slot was cut in each of the splashers of the 'G7' rebuilds thereby removing



M. & G.N.J.R. No. 54 with tender of Boyer Peacock 4-4-0 No. 22 at South Lynn, 1.7.36.
H. C. Casserley.

the necessity for the driver to wedge himself between the trailing splashers and the wheels in order to see into the axleboxes when oiling. Previously the fireman had oiled the driving boxes when going underneath to oil the crank shaft. No. 54 received the tender off the rebuilt "Peacock" No. 22, but this, although carrying 3,000 gallons of water, was not an improvement as the straight sides of the tender considerably reduced the coal capacity for the long runs which the engine made regularly between Yarmouth and Leicester and back. The cylinder lubricators were removed and an additional feed placed on the Sight Feed Lubricator.

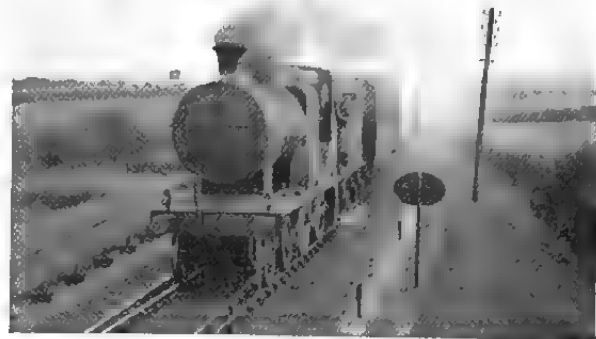
Stovepipe chimneys were fitted to Nos. 45, 55 and 56 as well as further extensions to the smokeboxes of the latter two engines. These two engines also had "Jumper" type blast pipes and the whole class had plates added over the front tube plates to encourage the draught in the lower tubes. A wide annular chimney soon replaced the stovepipe on No. 56. Prior to this as new boilers were required similar ones were purchased from the Midland Railway with a new type firedoor and Ross pop safety valves. The continuous hand-rail was removed around the smokebox and a new smoke box with snap head rivets and a door with bolt and clip fastenings replaced the old type. Small collapsible seats were fitted

on the driver's side of the cab and this relieved the drivers of the job of carrying the hook-on seats as before.

As readers can imagine the appearance of the engines was not improved by the foregoing alterations.

Of the smaller engines some received extensions to the cab roofs but no continuous upright grab iron was fitted. A few were fitted with steam sanding gear for reverse running and the sand boxes were placed between the coupled wheels being a great improvement on the old type carried on the front of the tender. Some of the engines also received steam heating connections at the front end as well as tablet catchers for reverse. The following were amongst those fitted: Nos. 1, 6, 11, 12, 42, 76 and 78. The wide annular chimney as fitted to No. 56 was fitted to Nos. 1, 4, 12, 38, 42, 48 and 78 and in the latter case a further extended smokebox was added. These short chimneys seriously affected the steaming qualities of the engines and also allowed the smoke to drift across the lookouts when running into a station. Needless to say the alterations and attendant discomfort added no credit to the fitting of these chimneys.

No. 56 on Yarmouth - Leicester express approaching Cross Keys Bridge.
E. E. Boltz.



The Rhymney Railway.

By D. S. M. BARRIE.

HAVING STUDIED THE EARLY HISTORY OF THE LINE IN SOME detail, I read Mr. W. Jones' article with great interest. I hope I shall be forgiven if I comment on one or two historical points referred to in the article:

1. Caerphilly was *not* "on a branch line" at the opening in 1858. The original Caerphilly station, the site of which can still be traced, was on what is now the Aber Junction-Penrhos Junction loop, which in 1858 formed part of the original main line. Passenger trains called there from the inauguration of the passenger service on 31st March, 1858. The Caerphilly branch—from Penrhos Junction to a station on the site of the present one—was opened in 1860, this station becoming a "through" one in 1871.

2. Rhymney Bridge is 1½ miles from Rhymney, not 3 miles. Presumably this distance is intended to apply to the Rhymney-Nantybweh Joint Line, opened in 1871. The R.R. being a partner in this line, there was no question of its requiring running powers to Nantybweh; the running powers granted by the L.N.W.R. were in fact from Nantybweh to Brynmawr and Ebbw Vale and later to Ivor Junction, Dowlais.

3. While the objects of the Ystrad Mynach-Penalltau Junc-

tion connection included access to the Taff Bargoed and Quakers' Yard and Merthyr Joint Lines, it was actually opened (27th September, 1871) before either of these joint lines, for the immediate purpose of enabling the Rhymney to use its running powers over the G.W.R. to Hirwaun.

4. The history of the L.N.W.R. through coach between Cardiff and the parent system is very complex and I have not been able to trace it all. The brief data quoted by Mr. Jones is as given in the *Railway Magazine* for September, 1924, but your contributor Mr. V. Stewart Harn has found for me a variety of through coaches beginning with Cardiff-Liverpool in 1873, and including Manchester (1892 and following years). It would be interesting to know when the through *passenger* coach workings ceased, as Mr. Harn has not been able to trace one after 1908, although he has found a through parcels van (Cardiff-Liverpool) as late as 1916.

May I add that as one who has specialised for many years in the history of the South Wales lines I have read your series of articles on them with the greatest pleasure; it is very satisfying to find that interest in them is being kept alive so many years after they ceased to have independent existence. I only hope that in seeking to clarify some of these difficult or doubtful points of their history I will not be regarded as a carping critic! Even recently, however, I have found from detailed study of Parliamentary and other official documents that there are some generally accepted references which need qualification.

THE HERTFORD AND WELWYN BRANCH.

By Gerald Druce

Cole Green Station, looking
towards Welwyn. G. Druce.



AMONG THE BRANCH LINES FROM WHICH THE PASSENGER service has recently been withdrawn is that from Welwyn Garden City to Hertford North which was closed to passenger traffic on the 18th June, the last trains running on the previous Saturday.

The first railway to serve Hertford was the Northern and Eastern which opened a branch from Broxbourne to a station near the present Hertford East in November 1843, and less than two years later suggestions were made for a westward extension of the line to Dunstable. Nothing came of this, however, until 1853, when an independent company, the Hertford and Welwyn Junction Railway, was formed to construct a line, seven miles in length, to connect the Hertford branch of the Eastern Counties Railway with the Great Northern at Welwyn. It obtained the necessary Act of Parliament on 3rd July, 1854 and the line was opened to passenger traffic on 1st March, 1858. A temporary station named Welwyn Junction was built for the interchange traffic and direct connection was made with the main line. There were intermediate stations at Cole Green and Hertingfordbury and at Hertford a station was built at Cowbridge, about $\frac{1}{2}$ mile from the Eastern Counties station. Arrangements

had been made whereby trains of both main line companies ran over the line, and through bookings were available between G.N.R. stations and E.C.R. stations in East London.

A westward extension of the line to Luton and Dunstable was opened in 1860 and the name was changed to the Hertford, Luton and Dunstable Railway. In the following year the company was absorbed into the Great Northern system. About the same time the two branches were extended to Hatfield, one on each side of the main line, and the temporary station was demolished.

Shortly after the Great Northern took over consideration was given to the necessity of widening the main line, but in order to attract more traffic it was proposed to construct a loop line from Hornsey to pass through Enfield and to join the Hertford - Welwyn branch at Hertingfordbury and in 1865 powers were obtained to construct the Hornsey and Hertford Railway. This was opened from Wood Green as far as Enfield in April 1871. These matters rested until 1898 when authorization was obtained for a continuation to Hertford and Stevenage. The 1914-18 war delayed construction and it was not until March 1918 that goods trains could use the loop. The new station at Hertford North on the loop line was opened on 2nd June, 1924 and the branch trains were diverted to this station, which is some way from the centre of the town. The old station is now used as a goods station and for offices.

There were also changes at the other end of the line about this time, when Welwyn Garden City was being built. A temporary station, served by the Hertford and Dunstable branch trains, was opened towards the end of the Great War and the permanent station was built on the site of the original Welwyn Junction of 1858. During the recent war alterations were made at Welwyn Garden City to enable southbound goods trains to use the track which had formerly carried the branch traffic to and from Hatfield and after 17th September 1944 the branch trains were cut back to Welwyn.

The opening of the direct route from Hertford to Kings Cross took much of the traffic away from the branch and the timetable in force when the line was closed showed 5 down and 6 up trains (6 and 8 re-

The Last down passenger train at Hertford North with 'N7/1' 69695. G. Druce.



spectively on Saturdays). The only train to run through to London was the 7.28 a.m. from Hertford North to Broad Street (arr. 8.44) which ran non-stop from Oakleigh Park to Finsbury Park. On Saturdays the last two trains in each direction did not call at the intermediate stations. 18-20 min. were allowed for down trains and 17 min. for up trains. There was no Sunday service. The train usually consisted of a two-coach articulated set hauled by an 'N1' or 'N7' 0-6-2 tank engine.

After leaving Welwyn Garden City the single track curves sharply south-east, there being a 15 m.p.h. speed limit round the bend. After leaving the factories the line runs through pleasantly wooded farmland with no great earthworks and gentle curves. The only passing loop is at Cole Green (4 miles from Welwyn). Although there is a platform on each side of the loop passenger trains were using the "down" platform in both directions. The signal box is on this platform and all the signals were of the G.N.R. "somersault" pattern. There is a small goods yard on the eastern side of the station. The only other intermediate station is at Hertingfordbury which has a single platform on the south side. The line continues under the viaduct carrying the loop line over the Lea valley and then curves round and up a steep incline to reach Hertford North. The connecting line does not come up to the level of the station, but curves east and downhill to the goods station and Hertford East.

Through the courtesy of British Railways I was permitted to travel on the footplate of the locomotive hauling the last train and so I joined Inspector Maynard of

Kings Cross and Driver Warner and Fireman Hill of Hatfield shed on 'N7' class 0-6-2 tank No. 69695, running bunker-first. An extra two-coach articulated unit had been added to the train, which weighed just over 100 tons. It was well filled and the passengers included a group wearing costumes of the period when the line was opened. We left promptly at 7.18 p.m. amid a barrage of exploding detonators and slowed to walking pace to pick the electric tablet at the signal box. After the gradient down from Hertford North the line rises gradually to Cole Green. The regulator was set quarter open and slight adjustments made as necessary in the cut-off which was about 30 per cent. Rather surprisingly Hertingfordbury station was deserted but at Cole Green a small party was waiting and there were more detonators on the rails. Although the train was nominally non-stop we drew in at 7.24 and stopped for 1½ min. After Cole Green there is a short, but sharp, rise to Olwell sidings and the line then falls gradually to Welwyn. There are two level crossings on this stretch, presumably the locations of the halts which were provided for a few years during the last century. The track seemed to be in good condition.

Amid yet another chorus of fog signals the train came slowly to a rest in Welwyn Garden City station at 7.33 and so the last run was over. The time taken for the 6½-mile journey was 13½ min., allowing for the Cole Green stop, an average of almost 29 m.p.h.

The line is being kept open for goods traffic which requires two daily return trips.



BRADFORD RAILWAY CIRCLE PHOTOGRAPHIC COMPETITION.

First Prize Section A (most interesting railway photograph)—Engineers' inspection coach at Otley;
N.E.R. slotted signal in foreground.

D. Ibbotson.

OBSERVATION CAR.

Conducted by G. H. LAKE.

IT SEEMS THAT COMPARATIVELY FEW ENTHUSIASTS KNOW of, or make use of the Hackney Marshes at Copper Mill Junction for their train watching. At the foot of Springfield Park, Clapton, flows the River Lea, and between the waterway and the Eastern Region main line there is a large and pleasant piece of grass land open to the public. It is inclined to be waterlogged in winter but otherwise there appear to be no drawbacks. From the bottom of Spring Hill, which leads down from Clapton Common, there is a footbridge leading over the Lea on to the marshes by the rowing clubs' boat houses. Copper Mill Lane then starts and runs along the top of this open marsh, across the main railway by both a level crossing for vehicle and a low underline bridge for pedestrians and then continues on between two large reservoirs until it comes out at Black Horse Road, near St. James' Street Station, Walthamstow. The marsh I am referring to lies in the north-eastern corner of the group of triangle junctions where the Cambridge, Chingford, Stratford and Hackney Downs lines meet, cross over each other and diverge. From here one can get a wide view of all the train movements with probably the exception of the traffic passing between Lea Bridge and the Chingford line direct (which is very little anyway). In addition to all the Eastern Region traffic, certain L.M.R. trains have running powers (ex Midland rights) over this section from South Tottenham down to the Docks, and some S.R. locomotives used to work right through from Feltham to Temple Mills; I am not quite certain if they still do as I have not been down

to Copper Mill for some time. One can spend a very pleasant and profitable Saturday afternoon and see many kinds of locomotive and varying traffic passing. May I also add that there are good refreshment facilities by the boat houses and if one gets fed up with train watching there is always the boating on the Lea, and one can even admire ducks on the small pond of the crossing-keeper's house by the junction (see my photograph on p. 124, vol. 6, 'RAILWAYS'). This is also a good spot for photographers, there being plenty of elbow room in which to operate and a good choice of view points. The last time I spent a whole afternoon at Copper Mill was in July of last year in the company of my good friend K. A. C. R. Nunn when we secured one or two interesting shots including, I think it was four, excursions to Southend-on-Sea having come from Palace Gates, Enfield, Hertford, and the main line. The locomotives ranged from a 'J15,' 'J39,' 'L1' to a 'B1.' However, my chief memories of the afternoon were the excessive heat which rather deprived us of much energy and a very surly expression from the driver of a long distance freight, headed by a L.M.R. 2—8—0, who did not seem at all pleased at our attempts to place him on permanent record. The heat also deprived us of spectacular exhaust effects.

A few months ago a very excellent book on signalling was published entitled *Danger Ahead*. The author, Richard Blythe, very kindly included in his bibliography my book *The Railways of Tottenham*. This inclusion has brought some enquiries for it addressed to the old company Greenlake Publications, Ltd. As that company has ceased to exist I thought it would save time and expense if I mention this fact and that I myself have no copies of the book, but I would like to add that Mr. Richard Tilling, Printer and Publisher, of Great Dover Street, London, S.E.1, took over the small remaining stock of the work at the time and I understand that he still has a few copies available. It might also save some trouble if I added that the book dealing with the Isle of Man Railway by the late Ian Macnab is entirely out of print and has been for some years. It also seems that few second-hand copies ever come on the market.

Some Shed Scenes to Remember

By W. A. CAMWELL.

No. 18.

DENBIGH . . .

shed, L.M.S.R. (ex L.N.W.R.) as at 2nd May, 1937. Outside the shed are Standard '2P' 695, and ex-L.N.W. '5ft. 6in.' tanks 6607 and 6713. On shed or at rear: Ex L.N.W. '5ft. 6in.' tanks 6627/8, 6669, 6725 and 6747; ex-L.N.W. '18in.' 0—6—0 8516, and ex-L.Y.R. 0—6 0 12428.

Denbigh shed, like all other small sheds, is of a design almost all of its own. In pre-war days it resembled Coventry ex L.N.W.



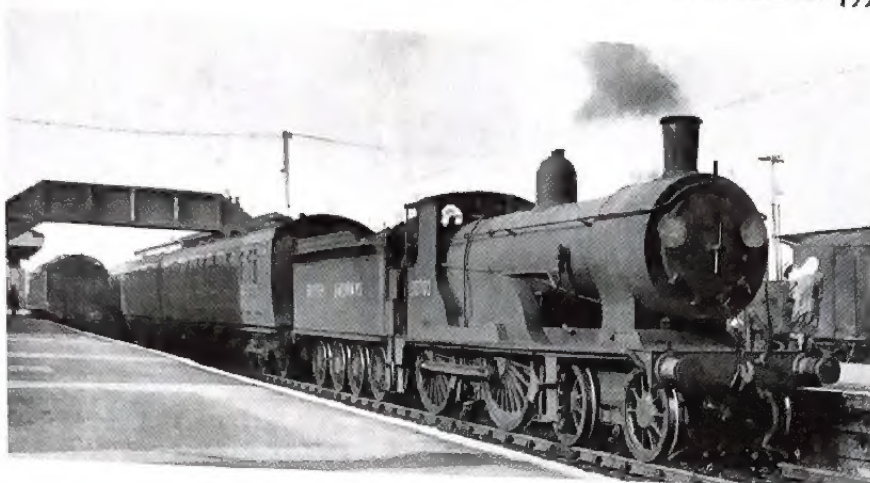
shed in structure, although only half the size. It certainly is not of the early standard L.N.W. design but in this respect it must be remembered that Denbigh was the H.Q. of the Vale of Clwyd Railway—opened 1858 and absorbed by the L.N.W.R. 1867. It is interesting to note that a stud of ex-L.N.W. 2—4—2Ts remained till 1947/8, when first L.Y.R. 2—4—2s ousted them and finally the new standard 2—6—2Ts.

Around the Branch Lines. No. 18.

By W. A. Camwell.

WADEBRIDGE

station, of the former Southern Railway, ex-L. & S.W.R., on 25th October, 1949, showing T9 ex-L.S.W. 30702 on the 3.18 p.m. to Okehampton and on the extreme left the 2.32 p.m. from Bodmin Road and Bodmin (G.W.R.) headed by G.W. 2-6-2T 4559.



GUILDFORD

station, of the former Southern Railway (ex-L. & S.W.R.) on 6th October, 1948, showing S. R. 2401 (Class 'ESK' ex-L.B.S.C.R.) on the 1.42 p.m. to Horsham. While the commonest sight in Guildford station is a Portsmouth "electric," or one from the Aldershot or Cobham lines, steam is still represented by trains on the former S.E. & C.R. Reading-Redhill branch and the former L.B. & S.C.R. Horsham branch—the latter leaves the main Portsmouth line nearly two miles south of Guildford at Peasmarsh Junction and $\frac{1}{2}$ mile south of the Redhill line junction.



THE DYKE BRANCH.

By G. T. Moody.

THIS LINE WAS CLOSED ON 1ST JANUARY, 1917, AS PART OF A general closure of minor branch lines and stations due to war conditions. It was re-opened on 26th July, 1920, and the signalling trials mentioned by Mr. Hector took place in September, 1921, the system tested being one invented by an Australian engineer named Angus. The L.B. & S.C.R. timetable for December, 1921, shows a week-day service by "rail motors third class only" leaving Brighton at 10 a.m., 11.15 a.m., 12.40, 2.30 and 3.48 p.m. with corresponding return trips from the Dyke. On 17th July, 1932, "Dyke Junction Halt" was renamed "Aldrington Halt" and on 18th December, 1933, "Rowan Halt (for Elm Drive)" was opened consisting of a single platform 70 ft. long, intended to give the residents of a developing part of Hove facilities for reaching main line business services at Brighton. In 1933 a light "Sentinel Cammell" steam rail bus was placed in service on the branch but in 1936 this vehicle was transferred to the Eastern Section for use on the Dunton Green-Westernham Section. It is said to have been seriously strained by a sudden rush of passengers on one of its trips from the Dyke. The branch was closed as from 1st January, 1939, and Dyke Junction box was subsequently removed and replaced by remote-controlled colour light signals. During the summer of 1938 there was a half-hourly service from Brighton to Rowan Halt from 6.42 to 8.13 a.m., and then at 9.10 a.m.

and hourly thereafter to the Dyke until 8.8 p.m., with corresponding return trips from Rowan Halt and the Dyke. On Sundays there were nine trains from Brighton and one from Hove to the Dyke between 10.10 a.m. and 8.10 p.m. with similar return trips.* All these services were third-class only. On August Bank Holiday, 1938, there was a total of 22 trains to the Dyke, of which 11 started from Brighton, 8 from Hove and 3 from Aldrington Halt. In the reverse direction 9 trains ran to Brighton and 13 to Hove. The first train left Brighton at 8.58 a.m. and the last at 8.43 p.m. from the Dyke ran to Hove only.

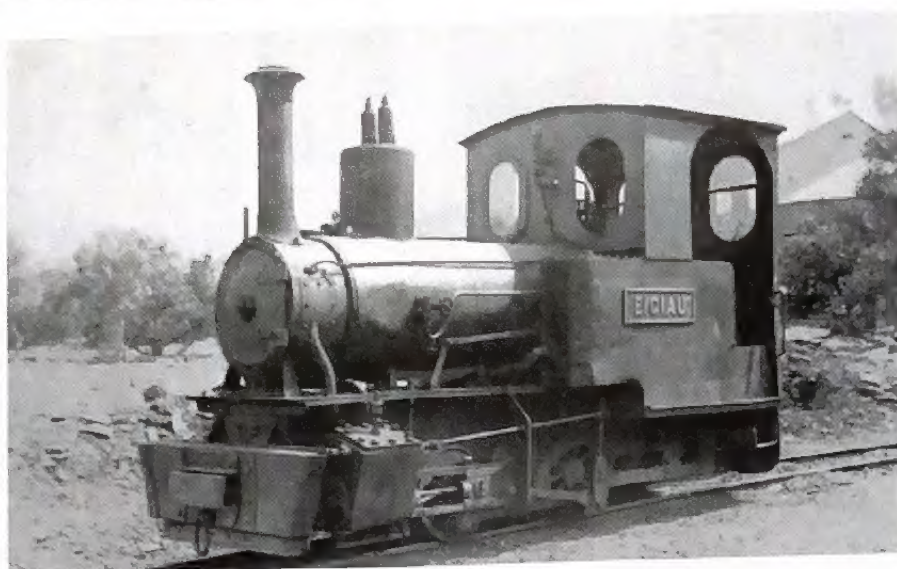
At one time the Devil's Dyke was one of the major attractions for visitors to Brighton, and it was recorded some 50 years ago that "a cable railway crosses the gully at a dizzy height, a lift brings travellers from the Weald, a wooden cannon of exceptional calibre threatens the landscape, and pictorial advertisements of the Devil and his domain may be seen at most of the Sussex Stations." Reference is also made to a "Gipsy Queen" who told fortunes in the vicinity of the Dyke station. It was probably the cessation of these amusements, plus the expansion of the local bus services, coupled with the increasing congestion of the line between Dyke Junction and Brighton owing to the frequent electric services which produced the cessation of a train service which had been in existence for over fifty years.

*The stop "on call" at the Golf Club platform was probably a private arrangement between the Southern Railway and the club as it is not mentioned in the public timetables.

Glimpses of the Narrow Gauge.

No. 14.

By J. I. C. Boyd.



IN 1925 THE BRITISH ISLES WAS SHOCKED BY A DISASTER at Dolgarrog in the Conway Valley of North Wales when the Eigiau dam burst.

The west slopes of the Vale of Conway are steep and rise sharply to 1,000 feet above the valley floor. Llyn Eigiau, lying under the eastern shoulder of Carnedd Llewelyn was converted into a reservoir by Messrs. Bott and Stennet in 1905/1910. For this purpose a standard gauge railway connecting with the L.N.W.R. branch from Llandudno Junction to Blaenau Festiniog was built, there being a cable-worked incline up the steep face previously mentioned. For two years two locomotives were used between the incline top and Eigiau but before 1914 a 2ft. gauge railway was substituted. After the disaster Messrs. MacAlpine (the well-known contractors) built a second narrow gauge system from the incline to a new Low Level Dam and at the same time they drove a narrow gauge tramway from the Low Level Dam south westward for almost four miles for the conversion of Llyn Cowlyd into a reservoir. This last route is still in existence, and shown on Ordnance Survey maps.

During this period (1920/25) there were other tunneling and pipe line projects in the area constructed with the help of narrow gauge railways and 'Eigiau' was one of several narrow gauge engines in use on this work.

The Cowlyd line is still in use for maintenance purposes, but a "Simplex" rail motor is now the only motive unit. 'Eigiau,' a standard Orenstein and Koppel well tank (6in. x 10in. cylinders, 3ft. 6in. wheelbase, 1ft. 10in. driving wheels, maker's number 5668 of 1912) was sold to the Penrhyn Quarries in 1929 where she is still extant but out of use. The photograph was taken last July. She is fitted with Hackworth valve gear.

An interesting day may be spent by walking north eastward over the hills from Capel Curig, and climbing to the summit of Pen Llithrig-y-Wrach (2,621ft.), which stands between the Eigiau and Cowlyd reservoirs and from which the tramway may be picked out as it winds a lonely course towards Dolgarrog; and then dropping down to rail level and following the somewhat boggy route of the track to the former locomotive shed at the incline top.

Mr. W. Gethin Jones, Engineer, Aluminium Corporation, Dolgarrog kindly supplied these historical notes. Unfortunately all local records were destroyed in the dam disaster.

PUNCTUALITY—British Railways Magazine for August gives the following punctuality figures for 1950: 68.4 per cent of long-distance trains were on time or not more than five minutes late (1949—66 per cent) and 61.9 per cent of express freight trains were not more than 30 minutes late (1949—54 per cent).



STRATFORD SHED.

July, 1951 showing
'Britannia' class
Geoffrey Chaucer
with a 'K1' (62019),
'B1' (61262) and
G.E.R. '1500' class in
background.
W. J. Reynolds.

BOOK REVIEWS

by Wingate H. Bett.

The British Transport Commission, whatever may be its shortcomings in other respects, produces some excellent publications, and *British Transport Review* (70 pp., paper cover, appearing thrice yearly) is a very good shillingworth. It is not a "house magazine" (that function is performed by other publications) but a periodical journal consisting chiefly of more-or-less-learned articles, of permanent value, on subjects of current transport interest. The April 1951 number, now to hand, has a variety of admirable articles, including three informative papers on staff matters ("The Welfare of Hotel Staff" by Phyllis M. Oxenford, "Labour Relationships on American Railways" by C. E. R. Sherrington, and "Lay Thoughts on Joint Consultation" by T. H. Hollingsworth), a readable account of the working of a large railway station, "A Station Master's Day" by J. L. Hadfield of Derby, L.M.R., and "Keeping London Moving" by A. B. B. Valentine, a member of the London Transport Executive. The last contains some interesting matter about London traffic problems, though the fact that the railways are hardly mentioned renders the title somewhat misleading—for we doubt if London traffic could be "kept moving" at all if it were not for the Tubes, to say nothing of the Southern Electric and other B.R. suburban services. Mr. Valentine makes out an unanswerable case for the bus, as opposed to the private car, as an economical user of road space, but as all this applies *a fortiori* to the tram, for which the L.T.E. has an unreasoning dislike, he is perhaps here guilty of the logical fallacy of "proving too much." He escapes from the dangerous consequences of his own argument by means of the sentence "I leave out the trams, as all the trams in London will have gone in two years' time," skilfully coupling this with a discussion of congestion, rather than of its relief. It is the two remaining articles, however, which will be of the greatest interest to railway students: "Integration of Transport: Some International Views" by A. A. Harrison, and "The Closing of Branch Lines and Intermediate Stations" by G. T. Ponsonby. The first of these articles contains a variety of views on the general question of rail and road co-ordination, expressed on the occasion of a meeting of the International Railway Congress Association at Rome last year, including some comments on the important question of branch line closure which is dealt with at greater length in the second article.

This is one of the most difficult problems facing railway administrations at the present time, and is also a matter of great interest to railway enthusiasts. The former may be charged with proceeding on the simple but disastrous basis of (a) raising fares until nearly all traffic is driven away, and then (b) attempting to avoid the resultant loss by simply closing down; while the latter in turn may be accused of allowing their merely sentimental attachment to quaint railway backwaters to override inescapable economic considerations. But there is a great deal more to be said than that, and Mr. Ponsonby has produced an admirable analysis of the factors involved. To begin with it is not always by

any means easy to state unequivocally whether a given branch line is "profitable" or not, for it is not always possible to apportion either costs or revenues fairly between the branch and the rest of the system—and indeed, it is probably best to think of the "system" as a whole, and the question then is whether it will function better and more profitably with or without the branch; i.e. whether the contemplated closure will be a beneficent pruning or a harmful mutilation.

Before considering the economic questions involved, Mr. Ponsonby assumes "that those responsible for the branch have already made every effort to make the best of it as a revenue-earning asset, in the sense that both charges and services have been so adjusted to local requirements that the financial results of the branch could be improved by any further change," adding in a footnote "This assumption is highly important." Indeed it is, but it is a large assumption, and we wish we could believe that it really is given due weight. But is there any evidence that the recent spate of branch-line closures has been preceded by any substantial efforts along these lines?

There are pitfalls, too, as the author sagaciously points out, in estimating the fall in revenue which will result from closure. It can by no means be assumed that this will be confined to actual branch-line fares, for much traffic beyond the junction may also be lost, including perhaps a substantial amount from holders of through season tickets. (It should always be remembered that season-ticket traffic is the "hard core" of local railway passenger revenue, and once lost is *never* regained.)

In another discerning footnote, the author refers to the desirability of substantial "tidying-up" operations on abandoned lines, which in themselves will add to the cost of abandonment. "Few spectacles are more depressing than that of slowly disintegrating buildings, rolling stock, bridges and other equipment," he points out, and we believe this opens up a large subject which has received insufficient attention—the undesirable psychological effect of the spectacle of even partial decay in railway facilities, which may adversely affect traffic far beyond the areas actually involved.

Another virtually unexplored possibility, which Mr. Ponsonby touches on in his closing paragraph, is embodied in the words "Now . . . there is a greater variety of possible units to be operated on the railways." Has sufficient thought been given to the drastic reorganisation of operating methods on branches—e.g. the use of light diesel railcars, de-signalling, de-staffing of stations and operation as light railways? If there are legal difficulties, the British Transport Commission should be in a far better position than private companies to overcome them, and such methods might well create a net economy while enabling *additional* branch-line halts to be opened.

In short, while some "pruning" may be inevitable, we believe that branch-line closure is, in general, thoroughly undesirable, and that in many indirect and intangible ways as well as the more obvious ones. We believe, too, that in many cases it could be avoided by adjustments of fare policy or operating policy, and that these possibilities, which cry aloud for exploration, have been so far practically untouched. Mr. Ponsonby has done a great

service in his careful analysis of the question, and we trust that a more enterprising spirit will be shown before further wholesale closures are irrevocably effected.

We have commented at length on this particular article in view of the great interest and topicality of its subject. It remains to be said that the *B.T. Review*, which we cordially commend, is rounded off with a selection of notices of recent publications.

Overseas Notes.

Austria.

The work of electrification on the last and principal section of the Linz-Vienna line has now reached the point at which the electrification of the section Linz-Amstetten during the summer of 1951 can be envisaged. If no unforeseen difficulty occurs, it may be expected that towards the end of 1952 the remaining section as far as Vienna will be ready, and therefore there will be electric traction also from Bregenz as far as the new West Station of Vienna which will be ready by that time.

The first of the eight new double auto-rails (VT 45) may be put into operation next autumn. They consist of two 4-axle coaches forming a complete unit of which one half will serve for the 500 h.p. diesel, a cabin for the driver, a buffet and 56 passenger seats, and the other half will contain 80 seats for the passengers and one cabin for the driver.

Canada.

Forty diesel locomotive units were ordered in 1951 and when delivery of the new units is completed the C.P.R. will have 230 diesel units. The latest diesel order placed by the Canadian Pacific will see 28 units delivered later this year to power freight and passenger trains on the Lagan and Mountain sub-divisions in the Canadian Rockies between Calgary and Revelstoke. Ironically the diesels will replace the Selkirk steam locomotives, largest in the British Empire, used in that area for the heavy mountain work and among them will be locomotive 5935, probably the last steam locomotive to be acquired by the Canadian Pacific, being the last of an order for six delivered in 1949.

Germany.

Two experts of the Munich Railway Central Service who are engaged on development of road traffic have constructed an experimental articulated bogie which can be inserted under an

ordinary autocar. Thus an autocar upon arriving at a railway station can be transferred directly on to the railway lines and continue the journey by rail. The first test was made on 16th June, 1951, on the lines of the Frankfurt Region, and a speed of 75 km.p.h. was achieved.

Italy.

New electro-rails having been put into operation the intensifying of rapid passenger services has been made possible. Typical are the new 4½ hr. services between Bologna-Genoa (194 miles) and Milan-Leghorn (212½ miles).

Norway.

The Norwegian Railways are at present working on the electrification of the 107 Km. Bergen-Vos line. Before the electrification various works must be carried out in order to widen the gauge. The line is also to be reconstructed in six sections.

On 14th June, 1951, the electrification of the Kongsvinger Railway was inaugurated. The line represents the oldest connection between Oslo and Stockholm having been opened in 1865 and as a result of the electrification there is a gain of 55-60 min. on the former time required to cover this route.

Rumania.

During the war the Rumanian Railways lost over 300 locomotives and 6,000 carriages and wagons. Since 1945 three new repair depots have been built and a considerable mileage of track has been relaid. The average speed of trains is now higher than in 1938. The present programme includes the building of 400 coaches and nearly 10,000 wagons, and the electrification of busy lines.

Russia.

The first section of the Moscow Underground Railway was opened in May 1935, since when the system has been gradually extended. Work is now in progress on the construction of a circular line, the first section of which was opened in January 1950. It is planned to complete this work next year. Escalators are being provided at the new stations. The latest motor carriages are flush panelled with four sets of sliding doors. They have large headlamps and a prominent destination indicator.

Spain.

The Centenary of the Madrid-Aranjuez line has recently been celebrated. This line was the second to be constructed in Spain and the first of those departing from Madrid. It was the first section of the Madrid-Alicante line.

Traffic Barometer.

The comparison of 1951 with 1950 is affected by the increases in rates and charges which were introduced in 1950.

	Period 7, 1951.	4 Weeks to 15th July.	Aggregate for Twenty-eight Weeks.		+ or - over 1950.
		1951 £,000's	1950 £,000's	1951 £,000's	1950 £,000's
British Railways					
Passengers		10,719	10,361	53,189	54,580
Parcels, etc., by Passenger rail		2,614	2,491	17,566	15,758
Merchandise and Livestock		7,807	7,028	52,511	45,818
Minerals		2,891	2,517	19,133	17,035
Coal and Coke		6,941	6,518	48,456	40,226
		30,972	28,815	190,655	175,417
London Transport					
Railways		1,228	1,068	8,550	7,703
					+847

Locomotive Stock Alterations.

North Eastern Region—July, 1951.

New: 2MT 46470/1/2.
Condemned: G5 67264; J71 68248, 8231; N9 9423.

Eastern Region—July, 1951.

New: 4MT 43111, 43137; 2MT 46468/9; Elec 26016/6/7.
Condemned: F4 7153; J1 5006; J3 4158, 64139/42; J35 5362; J66 8376; O3 63476; L2 69055.

Transferred: to Scot. R. J39 64727/33, O6 48756, 4MT 43137; from Scot. R. J69 68623/35, 4MTT 42190; to L.M.R. Y3 68162; from L.M.R. Diesel 12091; from

N.E.R. A5 69801/10/18; to N.E.R. A5 69837/41/42.

London Midland Region—to 14th July, 1951.

New: 4MTT 43118/9/20; 350 h.p. Diesel 12090/1.
Condemned: 4P 41005 (M.R.); 2P 40508/46 (M.R.); 1PT 6528 (L.N.W.); 6P 49030/370 (L.N.W.); 3F 12580, 52088/238/446 (L.Y.R.); 2F 28545 (L.N.W.); 2F 3177, 3617, 58237/302 (M.R.); 1PT 1781, 1856 (M.R.).

Transferred: from W.R. 70016.
As from 1st July, 1951 Carlisle (Canal) M.P.D. has been transferred to the Scot. R.

Southern Region—27th July, 1951.

New: 4MTT 80010/1; diesel 15229.
Condemned: H1 32037/8; L12 30423/4; E 31515/87; I3 32023; I1x 32002; D1 32359; H 31016/182; L11 30436; K10

30389; O3 32300; O1 31108/373; T 31602.

Transferred: to L.M.R.—All 8F 2—8—0s remaining on S. Reg.

Western Region—July, 1951.

New: 70020; 8472; 9451/2/3.
Condemned: 4003 Lode Star; 4047 Princess Louise; 9089; 5364; 5129; 293 (TVR 59); 2044/51.

Scottish Region—16th June, 1951.

Condemned: 2F 57323; 4MT 57951; B12 61503; J36 65245; J24 5623; D33 62451; 2F 57455.

Transferred: from E.R.: K2 61721/34/69; V2 60814.

Scottish Region—14th July, 1951.

New: 73005/6/7/8.
Condemned: D41 62251; J36 65238/508; 2F 57306; 2PT 55138; 4PT 55353.